

AMENDMENTS TO THE DRAWINGS

Please replace the originally filed thirteen (13) drawing sheets with the attached thirteen (13) Replacement Drawings Sheets, amending the drawing sheets to remove foreign language.

REMARKS

Claims 1-23, 25-27, 29-31 and 33 are pending in this application. Claims 1, 4, 18 and 21-23 are the independent claims. By this Amendment, claims 24, 28 and 32 are cancelled without prejudice or disclaimer. Claims 1, 2, 4, 6, 7, 10, 12, 15, 18, 21-23 and 30 are amended. No new matter is added.

Drawings

The drawings are objected to for including a foreign language. As the drawings are amended, as provided in the attached Replacement Sheets to remove the foreign language, withdrawal of the objection is respectfully requested.

Specification

The specification is objected to for failing to include section headings. As the use of section headings is merely a suggestion, there is no requirement to include the section headings as alleged in the Office Action. However, to expedite prosecution, certain section headings are added to aid the reader.

The specification is also objected to for referring to a claim. As the specification is amended to remove reference to a claim, withdrawal of the objection is respectfully requested.

The Abstract of the specification is objected to for allegedly including “legal phraseology.” As the Abstract published in the present application contains no “legal phraseology,” withdrawal of the objection is respectfully requested.

Allowable Subject Matter

The indication that claims 13, 17, 22 and 29 would be allowable if rewritten to overcome the rejections under 35 USC §112, and to include the features of their respective base claims is appreciated.

Claim Rejections Under 35 USC §112

Claims 1-33 are rejected under 35 USC §112, second paragraph for antecedent basis issues. As the claims are amended to remove all of the antecedent basis issues referred to in the Office Action, withdrawal of the rejection is respectfully requested.

Claim Rejections Under 35 USC §103

Claims 1-4, 7-12, 14, 15, 18-20, 27, 28 and 30-33 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,337,944 to Morris in view of U.S. Patent No. 5,186,592 to Budenbender and U.S. Patent No. 4,315,132 to Saurin, et al. (Saurin). As claims 28 and 32 are cancelled, the rejection of those claims is moot. The rejection of claims 1-4, 7-12, 14, 15 18-20, 27, 31 and 33 is respectfully traversed.

None of the applied references, whether considered alone or in combination, disclose or suggest, a method for the production of a can body with a closed can shell and at least one closure member arranged on the can shell, comprising...forming a metal strip to a tube closed in peripheral direction; laser welding a longitudinal seam in between lateral edges of the tube shaped metal strip substantially continuously in longitudinal direction of the tube... and for attaching the bottom to the can shell, the face side of the bottom and the face side of the can shell at the bottom are on opposite sides of the can body, one inside and one outside of the can, as recited in independent claim 1, or the similar features recited in independent claims 4 and 18.

It is alleged in the Office Action that the (arc) welding method of Morris corresponds to the claimed laser welding because “the Applicant has not disclosed that welding by laser solves any stated problem or is for any particular purpose.” Applicant respectfully disagrees and refers the Examiner to page 8, lines 30-37 of the specification which recites “After the welding procedure, the free film margin can be put over the welding seam and can be sealed. In this way, the longitudinal seam is completely covered. It has turned out, that for welding the longitudinal seam laser can be used which form only a very narrow seam. In the region of a narrow seam, the decorative film may be removed by a further laser.” Other passages which state a particular purpose for the use laser welding may be found, for example, at page 11, line 32-page 12, line 12 and page 32, lines 2-5. Thus, the arc welding of Morris does not correspond to the claimed laser welding.

Further, it is alleged in the Office Action that Budenbender discloses “and for attaching the bottom to the can shell, the face side of the bottom and the face side of the can shell at the bottom are on opposite sides of the can body, one inside and one outside of the can” previously recited in cancelled claim 28 and now included in claims 1 and 4, or the similar features previously recited in cancelled claim 32 and now included in claim 18.

Budenbender discloses that a cup shaped closure is fitted into a body of a drum and that the closure has its outer edge rolled inwardly against the outer surface of the drum. The closure

is fitted into the drum and therefore the free upper edge of the drum (the face side of the can shell) cannot be at the inside of the can body. Further, the outer edge of the closure (the face side of the bottom) cannot be at the inside of the can body because the closure has its outer edge at the outer surface of the drum. Since neither of the two edges (face sides) is inside the can, there is no disclosure or suggestion of edges (face sides) on opposite sides of the can body, one inside and one outside of the can.

It is further alleged that it would have been obvious to modify Morris to use the laser welding technique of Saurin. However, there is no suggestion or motivation to modify Morris as suggested, nor would there be any expectation of success upon combining the references because Morris merely discloses that at a region of the weld point, upper and lower rollers 69, 70 must press the edges together in welded relation (col. 5, lines 11-14). Therefore, due to the rollers 69, 70 there would be no space for a laser beam to reach the weld point.

Accordingly, the references fail to disclose or suggest the features as alleged in the Office Action.

Regarding claim 2, the combination of references fails to disclose or suggest “wherein the longitudinal seam is welded on the tube shaped metal strip in a flat pressed shape while lateral marginal regions to be interconnected at the lateral edges are supported on the inner side of the can shell.”

For example, Morris discloses the use of two parts of a mandrel 66, 67 and a lower roller 70 within the tube strip at the welding area (see Fig. 12). At the region of the weld point the tube is circular or oval in cross-section (col. 4, lines 4-9) and the upper and lower rollers 69, 70 press the edges together in welded relation (col. 5, lines 11-14). Thus, in Morris the seam is welded when the tube strip is in a circular or oval shape and not in a flat pressed shape, as recited in claim 2.

It is also alleged that it would have been obvious to modify Morris to use the laser welding of Saurin because Applicant has allegedly failed to disclose that laser welding solves any stated problem or any particular purpose (relying on page 24, lines 4-7 of the present application for support). However, as discussed above, Applicant has provided ample statement of a particular purpose for use of laser welding. Moreover, in Saurin, there must be a core inside the tubular body that occupies the entire cross-section, or at least the cross-section at the edge regions of the sheet (col. 2, lines 60-62). Therefore, the metal strip is not in a flat shape due to the core.

Further, the cited section of the present application relates to a circumferential weld between the can shell and the closure member and not to a “longitudinal seam” of the can shell as recited in the rejected claim. Additionally, as discussed above, Applicant provides specific examples of a particular purpose for laser welding which is not taught by Saurin.

As the combination of references fails to disclose all of the features recited in the rejected claims, as amended,

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris, Budenbender and Saurin in view of U.S. Patent No. 3,526,186 to Cornelius. The rejection is respectfully traversed.

Claims 5 and 6 are allowable for their dependency on independent claim 1 for the reasons discussed above, as well as for the additional features recited therein. Moreover, as Cornelius does not overcome the deficiencies of Morris, Budenbender and Saurin, the combination of references fails to render the rejected claims obvious. Therefore, withdrawal of the rejection is respectfully requested.

Claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over Morris, Budenbender and Saurin in view of U.S. Patent No. 6,389,866 to Radtke. The rejection is respectfully traversed.

Claim 16 is allowable for its dependency on independent claim 1 for the reasons discussed above, as well as for the additional features recited therein. For example, Radtke discloses press fitting a mounting cup 10 to an aerosol can body by aligning a series of grooves and dimples formed on respective surfaces. Thus, Radtke does not disclose or suggest “an upper closure member together with a valve is attached to the can shell by laser welding,” as recited in claim 16.

It is alleged that it would have been obvious to modify Morris to include an aerosol can top as disclosed in Radtke and attach the top by laser welding because Applicant allegedly fails to state any particular purpose for laser welding. As the purpose for laser welding is clearly stated throughout the specification of the present application, there is no motivation or suggestion to combine the references as proposed.

As Radtke does not overcome the deficiencies of Morris, Budenbender and Saurin, the combination of references fails to render the rejected claims obvious. Therefore, withdrawal of the rejection is respectfully requested.

Claims 21 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Budenbender, Morris and Saurin. Claim 23 is rejected under 35 U.S.C. §103(a) as being unpatentable over Morris, Budenbender in view of Radtke. As claim 24 is cancelled, the rejection of that claim is moot. The rejection of claims 21, 23, 25 and 26 is respectfully traversed.

The combination of references fails to disclose or suggest all of the features recited in the rejected claims. For example, the combination of references fails to disclose or suggest, a can body including a can shell, closed by way of a longitudinal laser welding seam, and a bottom fixed at one face side of the can shell, wherein...an outer marginal region of the can bottom is adapted to the shape of said restriction and the face side of the can shell and the face side of the bottom attached at said face of the can shell are on opposite sides of the can body, one inside and one outside of the can, as recited in independent claim 21, or the similar features recited in independent claim 23.

As discussed above, the arc welding method of Morris fails to correspond to the laser welding method of the rejected claims. Further, Applicant has stated particular purpose and advantages of using laser welding in the claimed process and therefore there is no motivation or suggestion to combine the references as proposed.

Even were the references combined, there would be no expectation of success because the laser welding technique of Saurin would not work due to the rollers 69, 70, as discussed above.

Finally, as discussed above, Budenbender discloses that a cup shaped closure is fitted into a body of a drum and that the closure has its outer edge rolled inwardly against the outer surface of the drum. The closure is fitted into the drum and therefore the free upper edge of the drum (the face side of the can shell) cannot be at the inside of the can body. Further, the outer edge of the closure (the face side of the bottom) cannot be at the inside of the can body because the closure has its outer edge at the outer surface of the drum. Since neither of the two edges (face sides) is inside the can, there is no disclosure or suggestion of edges (face sides) on opposite sides of the can body, one inside and one outside of the can.

As none of the combination of references fails to disclose or suggest the claimed features, withdrawal of the rejection is respectfully traversed.

CONCLUSION

In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley, Reg. No. 34,313, at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By: 

John W. Fitzpatrick, Reg. No. 41,018

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

DJD/JWF/akp